

In the claims:

1. (Original) A sensor system for a conductive coating delivery system subject to high voltage, comprising:

a movable element including a magnetically acting transmitter element for signaling the position or movement of said movable member, and

a sensor element responsive to said magnetically acting transmitter element in a portion of said conductive coating delivery system subject to high voltage, said sensor element including an optical polarizing device subject to magneto-optical change upon approach of said magnetically acting transmitter element of said movable member generating a light signal, and

optical fibers connected to said sensor receiving said light signal connected to an electronic device situated remotely from said high voltage generating an electric signal corresponding to said light signal.

2. (Original) The sensor as defined in Claim 1, wherein said magnetically acting transmitter element is a permanent magnet.

3. (Original) The sensor as defined in Claim 1, wherein said sensor element includes a refractor element which turns polarized light located between said polarization device and said reflector.

4. (Original) The sensor as defined in Claim 1, wherein said conductive coating delivery system includes a delivery line, said movable member is a pig movable through said delivery line and said pig including an embedded permanent magnet.

5. (Original) The sensor as defined in Claim 4, wherein said conductive coating delivery system includes a pig station receiving said pig and said sensor element is located in said pig station signaling receipt of said pig in said pig station.

6. (Original) The sensor as defined in Claim 4, wherein said sensor element is located adjacent said delivery line signaling movement of said pig through said delivery line past said sensor element.

7. (Original) The sensor as defined in Claim 1, wherein said conductive coating delivery system includes a delivery line receiving said movable member and said electronic device is connected to a valve delivering fluid to said delivery line.

8. (Original) The sensor as defined in Claim 1, wherein said conductive coating delivery system includes an apparatus having a movable member and a stationary member and said sensor element is located on said stationary member.

9. (Original) The sensor as defined in Claim 8, wherein said conductive coating delivery system includes a metering pump driven by a motor, wherein said magnetically acting transmitter element is located on a rotating component of said metering pump and motor.

10. (Original) A sensor system for a conductive coating delivery system, comprising:
a conductive coating delivery line, a pig movable through said conductive coating delivery line having a magnetically acting transmitter element for signaling a position or movement of said pig, and a sensor element responsive to said magnetically acting transmitter element of said pig in a portion of said conductive coating delivery system subject to high voltage, said sensor element including an optically polarizing device subject to magneto-optical change upon approach of said magnetically acting transmitter element of said pig generating a polarized light signal, optical fibers connected to said sensor element receiving said polarized light signal, and said optical fibers connected to an electrical device situated remotely from said high voltage receiving said polarized light signal and generating an electrical signal.

11. (Original) The sensor system as defined in Claim 10, wherein said conductive coating delivery system includes a pig station receiving said pig and said sensor element is located in said pig station.

12. (Original) The sensor system as defined in Claim 10, wherein said sensor element is adjacent said delivery line signaling movement of said pig through said delivery line past said sensor element.

13. (Original) The sensor system as defined in Claim 10, wherein said electrical device is connected to a valve delivering fluid to said conductive coating delivery line.

14. (Original) The sensor system as defined in Claim 10, wherein said magnetically acting transmitter element is a permanent magnet embedded in said pig.